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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,319	02/19/2002	Akifumi Kamijima	103977.01	2443

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EXAMINER

KIM, PAUL D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 01/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/076,319

Applicant(s)

KAMIJIMA, AKIFUMI

Examiner

Paul D Kim

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The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-16 is/are rejected.
- 7) ☒ Claim(s) 17-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/369,253.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: The phrase "the yoke part 221" disclosed in line 28 of specification does not in the drawings. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A METHOD FOR MANUFACTURING A THIN FILM MAGNETIC HEAD--.

Claim Objections

3. Claims 13-19 are objected to because of the following informalities:

Re. Claim 13: The phrase "itself" recited in line 10 is not clear as to what the "itself" is indicated.

Re. Claims 14-19: The phrase "A method" in line 1 should be --The method--.
Appropriate correction is required.

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Re. Claim 16: After the phrase "comprising step of" in line 2, delete ":".

The phrase "its" recited in line 3 is not clear as to what the "its" is indicated.

Re. Claim 19: After the phrase "comprising step of" in line 2, delete ":".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamacawa et al. (US PAT. 5,126,907) in view of Seagle et al. (US PAT. 5,710,510).

Hamacawa et al. teach a process of making a thin film magnetic head comprising steps of: forming a main magnetic head (26A) having a pole part opposite to a first magnetic film (22A) via a gap film (23) and a yoke part connected to the first magnetic film backward in the opposite side of the pole part; and forming a subsidiary magnetic film in the area surrounded by the resist pattern as shown in Fig. 3 (see also col. 7, lines 23-65).

However, Hamacawa et al. do not teach a forming a pattern of resist around the main magnetic film. Seagle et al. teach a process of making a thin film magnetic head including steps of forming a photoresist film (112) on the second magnetic layer (equivalent with the main magnetic head) and forming an upper magnetic layer

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(equivalent with the subsidiary magnetic film) in order to deposit the upper magnetic layer at the desire location as shown in Fig. 6A (see also col. 6, lines 16-32). Therefore, it would also have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a process of forming the subsidiary magnetic film of Hamacawa et al. by using a photoresist formed on the main magnetic film as taught by Seagle et al. in order to deposit the upper magnetic layer at the desire location.

As per claims 14 and 15 Hamacawa et al. teach that the subsidiary magnetic film is formed by sputtering. It is also noted that electroplating process for forming the magnetic film is well known of art. As per claim 15 Seagle et al. teach that the subsidiary magnetic film is formed by plating.

6. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamacawa et al. in view of Seagle et al., and further in view of Sasaki et al. (US PAT. 6,233,813).

Hamacawa et al., modified by Seagle et al., teach all of the limitations as set forth above except forming a depression by partially removing the gap film and the first magnetic film. Sasaki et al. teach a process of making a thin film magnetic head including a process of forming a depression by partially removing a gap film (53) and a first magnetic film (56) as shown in Fig. 29 for preventing undesired leakage of a magnetic flux (see also, col. 12, line 1 to col. 14, line 8). Therefore, it would also have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a process of forming the subsidiary magnetic film of Hamacawa et al., modified by Seagle et al., by forming a depression by partially removing the gap film

and the first magnetic film as taught by Sasaki et al. for the purpose of preventing undesired leakage of a magnetic flux.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Santini (US PAT. 6,172,848) and Hiner et al. (US PAT. 6,032,353) are cited to further show the state of the art with respect to method of manufacturing a thin film magnetic head.

Allowable Subject Matter

8. Claims 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: As per claim 17 or 18 the prior art of record fails to disclose the claimed invention such as forming a depression by partially removing a gap film and a first magnetic film before or after the subsidiary magnetic film is formed. It is not obvious taken alone or in combination of other references fairly to suggest the claimed invention.

Conclusion

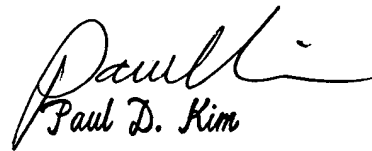
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 703-308-8356.

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The examiner can normally be reached on Tuesday-Friday between 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5648.

A handwritten signature in black ink, appearing to read "Paul D. Kim". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Examiner
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